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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,286	03/31/2006	Masayuki Oikawa	287800US26PCT	5521
22850 7590 03/31/2011 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
CHAN, CEDRIC A				
ART UNIT		PAPER NUMBER		
1773				
NOTIFICATION DATE		DELIVERY MODE		
03/31/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/574,286

Applicant(s)

OIKAWA ET AL.

Examiner

CEDRIC CHAN

Art Unit

1773

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-8, 10, 12-18 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 8, 10, 12-18, 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

The claims and remarks with original mailing date November 2, 2010 have been entered, along with the filing of the RCE on December 2, 2010. Claims 5, 9, 11, 19 and 20 had been previously canceled. Currently, claims 1-4, 6-8, 10, 12-18, 21, 22 and 23 are pending in this application. The claims have been given further consideration, and details of Examiner's findings are presented below.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 6-8, 10, 12-18 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marumo et al. (US 2003/0000458) in view of Ju et al. (Korean Patent Publication 2000-0020879).

Marumo discloses a quartz member for semiconductor manufacturing as well as a method for metal analysis using said quartz member.

Fig. 11 shows the apparatus of Marumo. The apparatus comprises a level base plate 2 having a circular opening 2a in the central portion thereof. In the opening 2a of the base plate 2, a quartz tube 3 is inserted through as a cylindrical treatment tube that is open at a lower end and has a flange portion 3a at the open end. A periphery portion of the flange portion 3a of the quartz tube 3 is removably attached to the base plate 2 through a manifold 4 (para. [0154]).

Downward of the quartz tube 3, a closing plate 50 for opening/closing a lower end opening thereof is disposed. On the closing plate 50, a wafer boat 51 for holding many pieces of semiconductor wafers level in multiple steps spaced in a vertical direction is disposed through a heat insulating mould 52. The closing plate 50 takes the wafer boat 51 into and out of the quartz tube 3, being connected to an elevator 53 for opening/closing the closing plate 50 (para. [0157]).

In operation, the closing plate 50 is opened, the wafer boat 51 holding the semiconductor wafers being introduced into the quartz tube 3 together with the heat insulating mould 52 due to an ascending movement of the closing plate 50. The

treatment gas is introduced through the gas inlet tube portion 3b to start treating (para. [0158]).

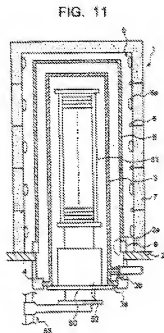


Fig. 11 is reproduced above, for Applicant's reference.

The analysis method comprises a first step of exposing a layer to be analyzed, a second step of chemically decomposing the layer to separate, a third step of analyzing an amount of metal, a fourth step of obtaining a volume of the layer, a fifth step of exposing anew a layer to be analyzed, and a sixth step of obtaining a concentration distribution of diffused metal. In the first step of exposing the layer to be analyzed, the layer to be analyzed at a desired depth in a quartz specimen is exposed.

In the second step of chemically decomposing the layer to separate, after the chemical decomposition of the layer, a decomposition product is separated from the quartz specimen. In the third step of analyzing an amount of metal, the amount of metal in the separated decomposition product is analyzed. In the fourth step of obtaining a

volume of the layer, the volume of the layer is obtained from a volume change between the quartz specimens before the chemical decomposition of the layer and after the separation of the decomposition product.

In the fifth step of exposing anew a layer to be analyzed, a layer to be analyzed furthermore inside in a thickness direction than the layer to have been analyzed is exposed. In the sixth step of obtaining a concentration distribution of diffused metal, the second to fifth steps are repeated to obtain the concentration distribution of the metal diffused in a thickness direction of the quartz specimen (see paragraph [0047]).

Marumo does not disclose the exact configuration of the "examination assistant device" that is claimed in the instant application. Accordingly, Marumo's method does not involve specifically the examination assistant device claimed.

Applicant-cited patent publication of Ju et al. (Korean Patent Publication 2000-0020879) teaches just such an examination assistant device.

Ju's device includes a pair of end plates (64) configured to engage with a quartz pole as taught in Marumo's disclosure and recited in the instant claims. A frame part (61) connects the pair of end plates, and the structure comprises an open area/region which is fully capable of receiving solution therein (see Fig. 4 of Pub. 2000-0020879).

It would have been obvious to incorporate the device taught and described by Ju in 2000-0020879, into the apparatus described by Marumo, in order to achieve the inspection of semiconductor wafers in Marumo's apparatus. Ju teaches, for example, that the wafer boat (which would be compatible with Marumo's apparatus -- see Marumo, Fig. 11 & Ju, Fig. 2) can prevent cracks and errors in wafer handling (see

Abstract of 2000-0020879). Marumo also suggests the use of a wafer boat, as discussed previously.

Response to Arguments

Applicant's arguments filed with the November 2, 2010 submission have been fully considered but they are not persuasive.

With regard to claim 1, Applicant suggests that the prior art cited previously (Marumo and Ju) failed to disclose the solution receiver recited in that claim. Specifically, Applicant submits the argument that the cited references (Marumo and Ju) fail to disclose the solution receiver having particular dimensions so as to enable the solution receiver to function (and be operated on) in the manner claimed. Specifically, the claim states that its "dimensions" enable it to store a process solution in a predetermined amount.

Examiner submits that the central issue here is our interpretation of the word "dimensions." Applicant suggests that Marumo and Ju fail to disclose the particular dimensions recited in the claim. But to that point, Examiner must respectfully disagree.

The Office determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." The language limiting the "dimensions" is acknowledged, but Examiner submits that the limitations do not sufficiently distinguish the instant device from the analogous components of the cited art.

The specification does give some definition to the claimed "dimensions."

Specifically, Applicant discloses dimensions in paragraph [0051] of the Specification (see the pre-grant U.S. publication of this case, US 2007/0008638 A1), for example, a description of the height of "side plates" (35) is given; also, a "predetermined distance" is disclosed as a feature of this invention that is described in the same paragraph. Ju's device might not teach every single feature of the solution receiver claimed. But Ju discloses two parallel side plates of a particular (same) height, for example.

Applicants also point to a diagram of the check tool of Ju as evidence supporting their argument that the Ju device "can not hold a solution therein." This must be true, Applicant argues (Remarks, pg. 12), because the device of Ju does not describe an enclosed volume that could hold a solution.

Again, analyzing only what's set forth in the claims, Examiner would point out that Ju's device can perform exactly as can the device claimed. It could hold a liquid located on it in direct contact with an examining portion of the device of Marumo. Applicant has recited no specific structure to contain a solution. Clearly a surface which retains even a minute amount of solution which would contact any device resting on that surface, reads on applicants "dimensions for storing the process solution in a predetermined amount." Applicant's recitation is broad and does encompass the device of Marumo as modified by Ju.

Conclusion

This is an RCE of applicant's earlier Application No. 10/574,286. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CEDRIC CHAN whose telephone number is (571) 270-3721. The examiner can normally be reached on Mon-Fri 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1773

/C. C./
Examiner, Art Unit 1773